

Central Solar Eclipses in Great Britain during 1,000 years.

By the Rev. S. J. Johnson.

The following list shows all the central eclipses I have been able to find in Great Britain from the thirteenth to the twenty-third century (inclusive), computed by the same approximate method used for the eclipses in the Saxon Chronicle (6th to 12th century). See *Monthly Notices*, April 1873.

1263 Aug.	d 5	h $1\frac{1}{4}$	annular	1737 March	d 1	h	annular
1279 April	12	$6\frac{1}{4}$	annular	1748 July	25		annular
1310 Jan.	31	$1\frac{1}{4}$	annular	1764 April	1		annular
1330 July	16	$3\frac{3}{4}$	total	1836 May	15		annular
1411 Aug.	18	6	annular	1847 Oct.	9		annular
1433 June	17	3	total	1858 March	15		annular
1502 Sept.	30	$18\frac{3}{4}$	annular	1927 June	28	$17\frac{1}{4}$	central
1547 Nov.	12	$1\frac{1}{4}$	annular	1999 Aug.	10	$22\frac{1}{4}$	total
1598 Feb.	25		total	2090 Sept.	23	$5\frac{1}{2}$	total
1601 Dec.	24	$1\frac{1}{4}$	annular	2093 July	23	$0\frac{1}{4}$	annular
1621 May	20	$20\frac{1}{4}$	annular	2135 Oct.	.6	$19\frac{3}{4}$	total
1652 April	8		total	2151 June	14	$6\frac{1}{2}$	total
1715 May	2	21	total	2189 Nov.	7	$20\frac{1}{2}$	total
1724 May	22		total	2200 April	14	$5\frac{1}{4}$	central

Continuing the examination to the year A.D. 2500, or 620 years from the present time, no eclipse appears likely to be quite total at Greenwich, the nearest approaches to this being 2151 June 14, and 2381 July 21, especially in the former instance.

Eclipse of 1279 is, by the tables used, annular at London.

1330. This is apparently total in Scotland for a very short time; and in 1339 July 7 at $\frac{1}{2}^h$ the annular phase may have touched the North of Scotland.

1411. Probably annular in Ireland and SW. of England.

On May 8, 1491, the central and annular phase would scarcely escape the mainland of Scotland at the extreme North.

1502. Very soon after sunrise.

1547. Very widely annular, and, by the tables used, London was within the track.

1601. Annular right across England. According to these tables, I also obtain an annular phase for Nidiosia (Drontheim) in Norway, where, in the appendix to Tycho Brahé's *Hist. Cel.* it is said to have been so observed. "Sol ita lunare corpus intra sui complexum comprehenderat, ut lux undiquaque ad marginem diffunderetur."

1621. Narrowly annular in England.

On June 10, 1630, the central phase, which must have been

an extremely narrow track, seems only just to have escaped the SW. coast. (Dr. Bainbridge made this eclipse to begin at Oxford at 5.58 and end at 7.48.)

2135. Seems to be total right across England, and deserves a rigorous computation.

2189. This may be total in the SW. of England.

*Abbenhall Rectory, Gloucester,
1880, May 10.*

On the Variability of B.A.C. 2472. By J. Tebbutt, Esq.

My suspicions as to the variability of this star were founded on an attempt to observe its occultation by the Moon on April 22, 1874. In the Occultation List of the *Nautical Almanac*, the star is set down as one of the sixth magnitude. The earliest recorded estimates of magnitude that I have yet been enabled to find are those by Lalande in his catalogue of 47390 stars for 1800. Two independent estimates of this astronomer assign 8 and $8\frac{1}{2}$ as its magnitude. In Taylor's Madras Catalogue for 1835, Robinson's Armagh Catalogue for 1840, and the new Greenwich Nine Year Catalogue, it is put down as of the 6th magnitude, while 6.5 is the estimate in the Washington Catalogue of 10658 stars for 1860. At the present epoch, however, it certainly does not exceed the 8th magnitude. As seen in the 3-inch Transit instrument, it will scarcely bear the faintest illumination of the wires, while B.A.C. 2469, which may be viewed in the same field with it, is distinct under strong illumination. I cannot find that B.A.C. 2472 has ever been suspected as a Variable, although it is situated far north of the equator, and not very distant from several well-known Variables in the constellation *Gemini*.

In conclusion, I may also record my strong suspicions as to the variable character of the star numbered 14571 in Lalande's Catalogue, which is, in fact, only a few minutes of a degree distant from B.A.C. 2472.

*Observatory, Windsor, N.S. Wales,
1880, January 12.*

Diagrams of the position of the Great Southern Comet, as seen Feb. 5-12, from the ship 'Superb,' were received from Mr. Barker, and a communication from Mr. Tebbutt, who saw the head of the Comet, for a few seconds, between clouds, on the evening of Feb. 14; also a set of elements computed by Mr. H. T. Vivian, from Mr. Gill's observations of Feb. 11, 13, 15, and agreeing tolerably well with those computed at Lord Lindsay's Observatory.

H H